

Title (en)

Pump, liquid transporting apparatus provided with the same, and liquid moving apparatus

Title (de)

Pumpe und Vorrichtung zum Befördern von Flüssigkeit

Title (fr)

Pompe et appareil de transport de liquides

Publication

EP 1662140 A2 20060531 (EN)

Application

EP 05026137 A 20051130

Priority

JP 2004346218 A 20041130

Abstract (en)

A pump 2 includes an ink pressurizing chamber 21, an inlet port 22 and an outlet port 23 communicating with the ink pressurizing chamber 21, a first valve member 24 provided near the inlet port 22, a second valve member 25 provided near the outlet port 23, a pressure adjustment channel 26 communicating with the ink pressurizing chamber 21, an electrode 27 provided on a wall surface forming the pressure adjustment channel 26, a driver IC which applies a voltage to the electrode 27, an insulating film 28 which is provided on a surface of the electrode 27 and in which when the voltage is applied to the electrode 27 a wetting angle of ink on a surface of the insulating film 28 is greater than that when no voltage is applied to the electrode 27, and a common electrode 29 always in contact with ink I in the ink pressurizing chamber 21 and held at a ground potential. Accordingly, a pump having a simple structure without any movable parts and with a low noise and less energy consumption can be provided.

IPC 8 full level

B41J 2/175 (2006.01); **F04B 17/00** (2006.01); **F04B 19/00** (2006.01); **F04B 19/20** (2006.01)

CPC (source: EP US)

B41J 2/005 (2013.01 - EP US); **B41J 2/17596** (2013.01 - EP US); **F04B 17/00** (2013.01 - EP US); **F04B 19/006** (2013.01 - EP US); **F04B 19/20** (2013.01 - EP US); **B41J 2002/14395** (2013.01 - EP US)

Citation (applicant)

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- J. NI ET AL.: "Analytical Chemistry", vol. 73, 1 January 2001, AMERICAN CHEMICAL SOCIETY, article "Electrochemically Actuated Mercury Pump for Fluid Flow and Delivery", pages: 103 - 110

Cited by

EP2044968A1; EP2014471A1; EP3505759A1

Designated contracting state (EPC)

DE FR GB

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1662140 A2 20060531; **EP 1662140 A3 20070725**; **EP 1662140 B1 20140806**; US 2006120879 A1 20060608; US 7370946 B2 20080513

DOCDB simple family (application)

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